PROGENY PROPOSAL

CPE

All user devices operating with full service flexibility[1] will use closed loop power control and be limited to a maximum transmit power of 4 W EIRP and an average power spectral density (PSD)[2] of 14 dBm / 3 kHz[3] except that the output power can be increased to 10 W EIRP and the PSD limit shall not apply:

1. In case of emergencies, natural or man-made disasters involving personal safety. (Example: to meet E-911 requirements.)

2. When performing multilateration as defined under the current service rules, which limit the information being transmitted to location information and associated status information and allow only store-and-forward access to the public switched network.

Safe harbor: As long as a device follows these limits, the testing requirements of 47 CFR 90.353(d) shall not apply.

Base Stations

Base stations operating with full service flexibility will (i.) Use closed loop power control and (ii.) Have an average power spectral density (PSD) limit of at most 24 dBm / 3 kHz EIRP, provided that the power will be reduced by up to 10 dB, i.e., to as low as 14 dBm / 3 kHz EIRP, if any Part 15 user who cannot reasonably utilize a channel outside the LMS band allocation experiences a PSD level of more than -17 dBm / 3 kHz. This coordination requirement will in be in lieu of the testing requirement [47 CFR 90.353(d)].

Provided further that once a base station is in operation for two months it will be grandfathered at 24 dBm / 3 kHz EIRP.

The rules for the 250 kHz Forward channels will be unchanged.

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[1] Full service flexibility has the meaning defined in Progeny's May 30, 2006 *Comment*. *See*, Comments of Progeny LMS, LLC, In the Matter of Amendment of the Commission's Part 90 Rules in the 904-909.75 MHz and 919.75-928 MHz bands, WT Docket 06-49, at p. 5 (May 30, 2006).

[2] Average power spectral density is integrated over the total channel bandwidth, measured as carrier occupancy to the 6 dB points on the carrier skirt.

[3] 14 dBm / 3 kHz EIRP is the current limit on Part 15 users, including an allowance of 6 dB for the antenna.

Comment on the Use of PSD

Instead of setting a power limit that is independent of channel bandwidth, and could lead to both high energy/Hz levels and high spectral occupancy, using PSD as a method of defining power ensures power levels that can be consistently predicted regardless of the bandwidth or modulation employed.

Rationale for the -17 dBm / 3 kHz Coordination Trigger

A Part 15 transmitter is allowed a maximum PSD of 14 dBm / 3 kHz. At a distance of one meter, the PSD from such a transmitter is reduced by approximately 31 dB due to free space path loss, to -17 dBm / 3 kHz. Thus, a coordination will be triggered if an LMS transmitter is producing a PSD equal to or greater than the PSD created by a Part 15 transmitter operating in approximately the same location. If the Commission were to adopt a more stringent standard for base stations, for example a PSD limit of -23 dBm/3 kHz rather than -17 dBm/ kHz, a reciprocal protection must be afforded to LMS base stations from any new Part 15 devices.